

ABSTRACT

An improved anisotropic bonding system and method connects two conductive surfaces together using an anisotropic material having elastic conductive particles dispersed in an insulating, heat-curable carrier. The system monitors bond resistance in real-time during the bonding process and controls the application of pressure to the bond based on a feedback signal corresponding to the bond resistance. When the bond resistance reaches a predetermined value, the applied pressure is reduced to a holding/clamping level to prevent over-compression as the curing schedule completes curing of the insulating carrier. By monitoring and responding to the bond resistance in real time during the bond compression process, the system prevents bond resistance increases caused by over-compression and conductor damage.

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